Appl. No. 10/014,192
Reply Brief in Response to
Examiner's Answer of 31 October 2007

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Appl. No.	: 10/014,192
Applicant	: GUTTA et al.
Filed	: 11/13/2001
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Examiner	: USTARIS, Joseph G.
Atty. Docket	: US-010569

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On: 30 December 2007
By:

Title: **METHOD AND APPARATUS FOR GENERATING A STEREOTYPICAL PROFILE FOR RECOMMENDING ITEMS OF INTEREST USING ITEM-BASED CLUSTERING**

Mail Stop: **APPEAL BRIEF - PATENTS**
Commissioner for Patents
Alexandria, VA 22313-1450

REPLY BRIEF UNDER 37 CFR 41.41

Sir:

This is a Reply Brief in response to the Examiner's answer dated 31 October 2007 in the subject application.

RESTATEMENT OF GROUNDS OF REJECTION

Claims 1, 3-9, 11-14, and 16-23 stand rejected under 35 U.S.C. 101.

Claims 1, 3-7, 9, 11-12, 14, 16-17, and 19-23 stand rejected under 35 U.S.C. 102(b) over Chislenko et al. (USP 6,041,311, hereinafter Chislenko).

Claims 8, 13, and 18 stand rejected under 35 U.S.C. 103(a) over Chislenko and Keyes et al. (USP 7,003,484, hereinafter Keyes).

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REMARKS REGARDING EXAMINER' ANSWER

Claims 1, 3-9, 11-14, and 16-23 stand rejected under 35 U.S.C. 101

The Examiner's Answer contains contradictory statements regarding the basis for this rejection.

At page 9, lines 2-3, of the Examiner's Answer, the Examiner states: "The claimed invention merely manipulates data or an abstract idea, or merely solves a mathematical problem *without a limitation to a practical application*". Conversely, at page 3, lines 11-14, the Examiner states: "While [claims] 1, 9, 14, 19, and 20 appear to broadly *recite a practical application* of the mathematical algorithm, such a broad application preempts the mathematical algorithm because in effect, it recites every "substantial practical application" thereof.

MPEP 2107 is quite specific with regard to a rejection for lack of utility:

> "If the applicant has asserted that the claimed invention is useful for any particular practical purpose (i.e., it has a "specific and substantial utility") and the assertion would be considered credible by a person of ordinary skill in the art, do not impose a rejection based on lack of utility."

and

> "If no assertion of specific and substantial utility for the claimed invention made by the applicant is credible, and the claimed invention does not have a readily apparent well-established utility, reject the claim(s) under 35 U.S.C. 101 on the grounds that the invention as claimed lacks utility. Also reject the claims under 35 U.S.C. 112, first paragraph, on the basis that the disclosure fails to teach how to use the invention as claimed."

Given that the Examiner's Answer is contradictory, and the Examiner has not rejected the claims under 35 U.S.C. 112, first paragraph, the applicants must conclude that the rejection is not based on a lack of utility.

The other basis for this rejection appears to be the assertion that the claims are "non-statutory as preempting a law of nature" (Examiner's Answer, page 3, lines 14-15). However, the applicants respectfully note that computing variances and selecting items based on the variances is not a law of nature.

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Because the Examiner has not provided a prima facie case to support a rejection of the applicants' claims 1, 3-9, 11-14, and 16-23 under 35 U.S.C. 101, the applicants respectfully request the Board's reversal of this rejection.

The Examiner's Answer is also contradictory with regard to the rejection of claim 19 under 35 U.S.C. 101. At the last three lines of page 3, the Examiner asserts that claim 19 is rejected because "the claimed invention is directed to a **disembodied** computer program". Conversely, at page 9, lines 9-10, the Examiner acknowledges that claim 19 "includes a computer program that is **embodied** on a computer-readable medium".

Because claim 19 does not recite a disembodied computer program, as asserted in the rejection of claim 19 under 35 U.S.C. 101, the applicants respectfully request the Board's reversal of this rejection.

Claims 1, 3-7, 9, 11-12, 14, 16-17, and 19-23 stand rejected under 35 U.S.C. 102(b) over Chislenko; and
Claims 8, 13, and 18 stand rejected under 35 U.S.C. 103(a) over Chislenko and Keyes

Claim 1 recites "computing a variance of the symbolic values of the plurality of items relative to the symbolic value of each of the items". Each of the other independent claims 9, 14, and 19 include a similar limitation.

The Examiner's Answer acknowledges that "Chislenko discloses the system computes a variance (e.g. how much of a difference/variance is the item rating from **the value of the group centroid**)" (Examiner's Answer, page 9, lines 19-20).

The applicants respectfully note that computing a variance relative to the symbolic value **of each of the items** is not the same as computing a variance relative to the symbolic value **of the group centroid**.

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The applicants clearly teach and claim that a variance of the group of items is determined relative to the value of each item, and then the item that provides the least variance among the group of items is selected as the mean item of the group. Chislenko does not teach determining a variance of the group of items relative to *any* item in the group, and particularly does not teach determining a variance of the group of items relative to *each* item in the group, as specifically claimed by the applicants.

The Examiner relies upon Chislenko's column 10, lines 32-64 for teaching all of the elements of claim 1. The applicants respectfully note that Chislenko's column 10, lines 32-64 teaches a conventional clustering technique, such as disclosed as process 400 in the applicants' specification (FIGs. 1 and 4). Conversely, the applicants' process 500 (FIGs. 1 and 5) is an example embodiment of the method of the applicants' claim 1.

As the Examiner notes, Chislenko teaches forming groups/clusters based on the differences between the values of the rating and the centroid of the items in the cluster (applicants' process 400). However, Chislenko does not then select an item as the mean item in the cluster based on the variance of the values of the items in the cluster relative to the value of each of the items (applicants' process 500), as claimed in independent claims 1, 9, 14, and 19.

Claims 8, 13, and 18 provide a specific mathematical formula for determining $Var(J) = \sum_{i \in J} (x_i - x_\mu)^2$ for *each item*, μ, where J is a cluster of items of a class, x_i is the symbolic value of each item, i, and x_μ *is the symbolic value of each item*, μ. The Examiner's Answer asserts that the value of the cluster centroid is equivalent to the value of an item; this is clearly erroneous, for it would only be coincidental that one of the items would lie at the center of the cluster. An average value of a plurality of items (centroid) is not equivalent to a value of one of the items as asserted in the Examiner's Answer (page 11, lines 17-19). Further, computing a variance based on an average value of the items in a group is not equivalent to computing a set of variances based on the value of each item in the group.

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Contrary to the Examiner's assertions, the applicants respectfully maintain that it would not be obvious to one of skill in the art to replace Keyes' process of computing a variance in the traditional manner, based on differences of each item from the average value of all the items, with the novel set of variances taught by the applicants, based on differences of each item from each of the items' values.
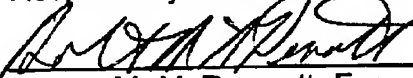
Because Chislenko fails to teach each of the elements of claims 1, 9, 14, and 19, the applicants respectfully request the Board's reversal of the rejection of claims 1, 3-7, 9, 11-12, 14, 16-17, and 19-23 under 35 U.S.C. 102(b) and claims 8, 13, and 18 under 35 U.S.C. 103(a).

CONCLUSIONS

Because the applicants have invented a new and useful process, system, and article of manufacture, and because each of the claims recites a practical application of the technical arts, the applicants respectfully request that the Examiner's rejection of claims 1, 3-9, 11-14, and 16-23 under 35 U.S.C. 101 be reversed by the Board, and the claims be allowed to pass to issue.

Because Chislenko fails to teach computing a variance of symbolic values of a plurality of items relative to the symbolic value of each of the items, and fails to teach selecting at least one mean item that has a symbolic value that minimizes the variance, the applicants respectfully request that the Examiner's rejection of claims 1, 3-7, 9, 11-12, 14, 16-17, and 19-23 under 35 U.S.C. 102(b) over Chislenko, and the rejection of claims 8, 13, and 18 under 35 U.S.C. 103(a) over Chislenko and Keyes be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted,

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